

3. ECLECTUS CARDINALIS (Bodd.).

Minor: mas viridis, *E. polychloro* similis, at colore lætiore caudâque magis cæruleâ distinguendus: femina rubra, fasciâ interscapulari et abdomine cyaneis; subcaudalibus auroreis vel rubro-flavis.

Hab. in insulis Moluccanis Ceram, Bouru, et Amboyna.

4. ECLECTUS WESTERMANNI, Bp.

Minor: mas viridis, lateribus concoloribus. Femina adhuc ignota.

Hab. —? (Viv. Nat. Art. Mag. et Zool. Soc. Lond.)

5. ECLECTUS CORNELIÆ, Bp.

Mas ignotus: femina punicea, colore cyaneo neque dorsi neque lateris inferioris ullo.

Hab. —? (Viv. Nat. Art. Mag. et Zool. Soc. Lond.)

XXIV.—On a Collection of Birds made by Mr. E. C. Buxton in the District of Lampong, S.E. Sumatra. By ARTHUR, Marquis of TWEEDDALE, M.B.O.U.

(Plates V. & VI.)

THE first systematic account of the Avifauna of Sumatra was written by Sir Stamford Raffles* at Fort Marlborough, near Bencoolen, of which settlement Sir Stamford was Lieutenant-Governor. Bencoolen is situated on the western shore of the southern half of the island of Sumatra; and most of the birds enumerated were obtained in the vicinity of Bencoolen itself, or during short trips made into the interior of the district of that name during the years 1819 and 1820, partly by Sir Stamford assisted by Dr. Joseph Arnold, and partly by Messrs. Diard and Duvaucel. These two gentlemen (the first a pupil, the other the step-son of the great Cuvier) were French naturalists, whose services Sir Stamford had secured while on a visit to Bengal. The unfortunate misunderstanding that soon after their arrival in Sumatra occurred

* Tr. L. S. xiii. pp. 277, 330; Appendix, pp. 339, 340 (dated June 1, 1820; read March 20, 1821). The date of the volume is 1822.

between the Lieutenant-Governor and these two Frenchmen led, in about twelve months, to a cessation of their labours and to their departure from Bencoolen; and Sir Stamford was obliged to undertake the description of the materials collected himself, or to allow the results to be published in France. Hence his papers in the 'Linnean Transactions'*. The number of species therein catalogued and more or less described is about 168. But some birds obtained in the Prince-of-Wales Island and Singapore are included; and a few species, such as *Psittacus ornatus* and *P. sumatranus*, appear to have been introduced into the list through oversight and on the strength of caged birds.

In 1830 Lady Raffles published a memoir† of her late husband, to which was appended a catalogue, by Vigors, of the zoological specimens collected in Sumatra under the superintendence of Sir S. Raffles, and by Dr. Horsfield of those in Java. About 194 species from Sumatra are enumerated, that locality being stated in each instance; and some species additional to Sir Stamford's list are discriminated and described as new by Vigors. This catalogue would have been more useful had its author identified all the species on which Sir Stamford had previously bestowed new titles, and had the invalid titles been reduced to synonyms—a work, however, subsequently accomplished in the most thorough manner by Mr. F. Moore‡.

Since 1830 no attempt at a complete account of the birds of Sumatra has been published; but a good many species not contained in Vigors's list have been discovered and described, principally by the Dutch zoologists, more particularly by Temminck§ and by Salomon Müller||. Mr. Wallace, during

* The collection of birds was sent to the E.I. C. Museum in London in 1820, and of drawings in 1821.

† Memoir of the Life and Public Services of Sir Stamford Raffles, by his Widow (1830); Cat. Zool. Specimens, *Aves*, pp. 648, 687.

‡ A Catalogue of the Birds in the Museum of the Hon. E.I. Company, in two vols.: vol. i. (1854), vol. ii. (1856–58).

§ Nouveau Recueil de Planches Coloriées d'Oiseaux, in five volumes. Date of completed work 1838.

|| Tijdschrift voor Natuurlijke Geschiedenis en Physiologie, ii. pp. 315, 354 (1835). Verhandelingen over de Natuurlijke Geschiedenis der Ne-

a stay of about three months, collected some birds in the district of Palembang, penetrating a hundred and twenty miles inland; but no separate account of his collection has appeared.

During a period of a little over five months, commencing the 30th of May, 1876, Mr. Edmund Charles Buxton travelled in the Lampong district, situated at the south-eastern extremity of Sumatra, and there made a large collection of birds, which he has kindly placed at my disposal, and of which I now propose to give an account. He started from Telok Betang and went inland to Sockedana, a distance of about 80 miles, and obtained in all 152 species, of which two appear to be undescribed. The general character of the birds in this part of Sumatra is Malaccan. Of Mr. Buxton's collection only twelve species are not inhabitants of the Malaccan peninsula as at present known; and of these eleven are Javan species, some of them recurring in Burma and one in India. They are *Dendrotypes analis*, *Batrachostomus cornutus*, *Xantholæma rosea*, *Dicaeum flammeum*, *Rubigula dispar*, *Oriolus coronatus*, *Prinia familiaris*, *Buchanga leucophæa*, *Pericrocotus xanthogaster*, *Munia leucogastroides*, *Crypsirhina varians*, *Sturnopastor contra*. One, *Batrachostomus cornutus*, is known, out of Sumatra, to occur in Borneo only.

The proportion of species, seventy-nine, which have also a Javan habitat is large, as might be inferred would be the case from the narrowness of the straits which separate South-eastern Sumatra from the western extremity of Java. This number may eventually be shown to be still greater when the ornithology of Java is better known.

Some notes were kept by Mr. Buxton; but, as they are chiefly descriptive of the plumage, I have only incorporated the few observations which relate to the soft parts or to habits. The chief value of the collection consists in its enabling us to establish positively, by critical com-

parison, the identity or non-identity of a large number of Sumatran species with those inhabiting Java, Borneo, and Malacca, and of enabling us to add a little to our knowledge of geographical distribution.

1. MICROHIERAX FRINGILLARIUS.

Falco fringillarius, Drapiez, Dict. Class. d'Hist. Nat. vi. p. 412, t. v., "des Indes" (1824).

A series of four individuals, identical with Malaccan examples. ["Sits on naked branches at top of trees."—*Buxton*.]

2. HALIASTUR INTERMEDIUS.

Falco pondicerianus, Gm.; Raffles, *t. c.* p. 278.

Haliastur intermedius, Gurney, Ibis, 1865, p. 28.

3. ASTUR TRIVIRGATUS.

Falco trivirgatus, Temm. Pl. Col. 203, "Sumatra" (1824).

4. PERNIS PTILORHYNCHUS.

Falco ptilorhynchus, Temm. Pl. Col. 44, "Java, Sumatra" (1823).

An example of a Honey-Buzzard was obtained by Mr. Buxton which has the feathers of the breast, abdomen, flanks, ventral region, and the thigh-coverts white or tawny white, transversely barred with two or three brown broad bands, the terminal band being narrowly fringed with tawny white or pure white. The feathers of the fore neck have darker brown drops, which occupy the terminal part of each plume, these drops being set between a rufo-fulvous and a white ground. The under wing-coverts are banded like the breast. The upper plumage is dark brown, the terminations of the feathers being darkest. The head and crest are black, the latter measuring about two and a quarter inches. The face is grey. The throat is white, with a central and two lateral dark brown streaks. Two broad dark brown bands traverse the middle rectrices, the latter being terminal. A third narrower band near the base of the tail is of a paler shade of brown. The intervening spaces are of a dirty yellowish white, much mottled with earthy brown.

The plumage of the under surface very closely resembles

that of *P. celebensis* in its markings ; but the colouring differs in being dark brown, and the chest is not tawny rufous.

5. NINOX SCUTULATA.

Strix scutulata, Raffles, *t. c.* p. 280, "Sumatra" (1821).

Mr. Buxton obtained two adult examples of this long-wished-for species at Tarahan, S.E. Sumatra. They are absolutely identical with Malaccan individuals in *mus. nostr.* ["Iris yellow ; bill dark slate, nearly black."—*Buxton.*]

6. RHOPODYTES ERYTHROGNATHUS.

Cuculus melanognathus, Horsf. apud Raffles, *t. c.* p. 287, "Sumatra."

Phœnicophaus erythrognaethus, Hartl. Verz. Mus. Brem. p. 95, "Sumatra" (1844).

Malaccan and Bornean examples do not differ from typical specimens.

7. RHOPODYTES DIARDI.

Melias diardi, Less. Tr. d'Orn. p. 132, "Java" (1831).

Malaccan individuals do not differ from Sumatran.

8. ZANCLOSTOMUS JAVANICUS.

Phœnicophaus javanicus, Horsf. *t. c.* p. 178, "Java" (1820) ; Zool. Res. Java, t. 5.

Typical specimens not separable from Sumatran and Malaccan.

9. RHINORTHA CHLOROPHÆA.

Cuculus chlorophæus, Raffles, *t. c.* p. 288, ♂, "Sumatra" (1821).

Phœnicophaus caniceps, Vigors, App. Mem. Raffles, p. 671, ♀, "Sumatra" (1830).

Malaccan and Bornean examples do not differ from Sumatran.

10. SURNICULUS LUGUBRIS.

Cuculus lugubris, Horsf. *t. c.* p. 175, "Java" (1820) ; Zool. Res. Java, t. 58.

Identical with typical specimens.

11. CHRYSOCOCCYX XANTHORHYNCHUS.

Cuculus xanthorhynchus, Horsf. *t. c.* p. 179, "Java" (1820) ; Zool. Res. Java, t. 59.

Undistinguishable from typical specimens.

12. *HIEROCOCCYX FUGAX.*

Cuculus fugax, Horsf. *t. c.* p. 178, "Java" (1820).

Sumatran, Bornean, and Malaccan examples offer no points of difference.

13. *CENTROPUS EURYCERCUS.*

Cuculus bubulus, Horsf. apud Raffles, *t. c.* p. 286, "Sumatra."

Centropus eurycercus, A. Hay; Blyth, J. A. S. B. 1845, p. 551, "Malacca."

Sumatran and Bornean individuals agree with typical specimens. As yet I have not been able to compare them with the Javan form, which is, according to Blyth (*l. c.*), a smaller species.

14. *THRIPONAX JAVENSIS.*

Picus javensis, Horsf. *t. c.* p. 172, "Java" (1820).

The examples obtained by Mr. Buxton in no respect differ from Malaccan, with which the type is said to agree.

15. *TIGA RAFFLESII.*

Picus rafflesii, Vigors, App. Mem. Raffles, p. 669, "Sumatra" (1830).

Bornean and Malaccan individuals are inseparable.

16. *TIGA JAVANENSIS.*

Picus javanensis, Ljungh, Act. Stockh. xviii. p. 134, "Java" (1797); Walden, Ibis, 1871, p. 164.

Picus tiga, Horsf. *t. c.* p. 177 "Java" (1820).

"*Tiga rufa*," Raffles, *t. c.* p. 290, "Sumatra" (1821).

Sumatran, Malaccan, and Javan individuals do not specifically differ. Of somewhat smaller dimensions than the race which inhabits the Burmese countries.

17. *CALLOLOPHUS MENTALIS.*

Picus mentalis, Temm. Pl. Col. 384, "Java" (1826).

Sumatran and Malaccan examples do not vary.

18. *CALLOLOPHUS PUNICEUS.*

Picus puniceus, Horsf. *t. c.* p. 176, "Java" (1821); Raffles, *t. c.* 289, "Sumatra" (1821).

Malaccan, Bornean, and Sumatran individuals do not differ.

19. CALLOLOPHUS MALACCENSIS.

Picus malaccensis, Lath. Ind. Orn. i. p. 241, "Malacca" (1790).

Count Salvadori has remarked (*t. c.* p. 51) that this species and *C. miniatus* of Java are distinct, and that I had erred (Ibis, 1871, p. 165) when, following Malherbe and others, I regarded them as belonging to the same species. Dr. Sclater appears to be the first author who distinguished the Javan on account of its uniform red crest and back from the Bornean and Malaccan form (P. Z. S. 1863, p. 211); but I may observe that I have an example collected in East Java by Mr. Wallace, and marked a male, which has the more elongated crest-plumes red, mingled quite as much with yellow as is to be found in true *C. malaccensis*. The feathers also of the interscapular region exhibit green mixed with red, and are matched by an example from Malacca collected by Mr. Maingay. Mr. Buxton has two Sumatran examples in his collection: one has the dorsal feathers green, largely dashed, centred, and tinged with red; the other has these feathers dull olive-green washed with red.

20. MICROPTERNUS BADIUS.

Picus badius, Raffles, *t. c.* p. 289, "Sumatra" (1821).

I provisionally retain the above title for the Sumatran *Micropternus* in preference to that of *brachyurus*, Vieill. (N. Dict. xxvi. p. 103, 1818), because the type of Vieillot's species is said to have come from Java, and we cannot rely on Malherbe's statement that the two are specifically identical. Between Malaccan and typical examples I am unable to detect any good distinction. Many Malaccan specimens have the crown very pale; but this is also to be observed in one of Mr. Buxton's birds. The Bornean (south-east and north-east) species, *M. badius*, appears to differ in having the terminal portions of the rectrices uniform unbanded brown and a somewhat longer bill. Count Salvadori (*t. c.* p. 59) mentions as a distinctive character the eye of the malê being completely surrounded by red points or dots. In a N.E. Bornean male collected by Mr. Everett, and in another by Mr. Lowe

(mus. nostr.), this is the case ; and I have not observed the same character in the multitude of Malaccan birds I have examined, nor is it to be found in Mr. Buxton's Sumatran males ; but it is to be observed in examples from Malabar, and it may merely indicate the full breeding male plumage of all the members of the genus.

21. MEIGLYPTES TRISTIS.

Picus tristis, Horsf. *t. c.* p. 177, "Java" (1820) ; Raffles, *t. c.* p. 290, "Sumatra" (1821).

Not distinguishable from Bornean and Malaccan individuals. The length of wing is very variable in adults of this species ; and in one of Mr. Buxton's specimens, an adult male, the bill is remarkably short.

22. MEIGLYPTES TUKKI.

Picus tukki, Lesson, Rev. Zool. 1839, p. 167, "Sumatra."

Malaccan examples (*Hemicercus brunneus*, Eyton, P. Z. S. 1839, p. 106) do not differ.

23. DENDROTYPES ANALIS.

Picus analis, Horsf. *t. c.* p. 177, "Java" (1820).

Bill longer, otherwise identical with typical examples. This Woodpecker also inhabits the island of Madura.

24. YUNGIPICUS FUSCO-ALBIDUS.

Picus variegatus, Latham, apud Wagler, Syst. Av. *Picus*, no. 27 (1827), nec Lath.

Yungipicus fusco-albidus, Salvadori, *t. c.* p. 42 (1874).

Picus sondaicus, Wallace, Gray, Hand-l. no. 8589, 1870 ; Salvadori, *t. c.* p. 43, note, "Java."

Mr. Buxton's Sumatran series of this small Woodpecker consists of examples undistinguishable from Malaccan and Javan individuals. Wagler described the species from Javan examples only (*conf.* Cab. Mus. Hein. iv. ii. p. 54, note) ; but he adopted for it Latham's (Gmelin's) title of *Picus variegatus*, bestowed on a South-American Woodpecker, and Count Salvadori has therefore superseded the title by a new one (*l. c.*). The title '*P. sondaicus*, Wallace, is founded solely on the Javan bird, and must fall, no description having accompanied the title when first published. Whatever *Picus mo-*

luccensis, Gm. (ex Pl. Enl. 748. f. 2), may be, it cannot apply to *Y. fusco-albidus*; for the bird figured by D'Aubenton is without any mandibular stripes.

25. HEMICERCUS SORDIDUS.

Dendrocopus sordidus, Eyton, Ann. & Mag. N. Hist. xvi. p. 229, "Malacca" (1845).

Hemicercus brookeanus, Salvadori, Atti. R. Ac. Sc. Tor. iii. p. 525, "Borneo" (1868); Ucc. Born. p. 44.

Hemicercus concretus (Reinw.), apud Salvadori, ex Borneo, Ucc. Born. p. 47, nec Reinw.

Mr. Buxton's series consists of three males and two females. These last are undistinguishable from Javan (*P. concretus* ♀) and Malaccan examples in the plumage of the female. One male is adult, and is identical with adult males from Malacca—that is, with the crest on the crown of the head deep crimson, the postoccipital crest-plumes being dark greyish olive. A second example, that of a young male, has the whole of the crown and *all* the crest-plumes dingy reddish buff or yellowish red. The third is intermediate, the coronal plumes being almost all pure crimson, and the postoccipital plumes passing over from the reddish tawny colour to olive-grey. I possess Malaccan skins which match these three Sumatran males. In all the under surface is dark olive-grey. The coronal plumes in other Malaccan examples of young males are ruddy buff, while the elongated occipital crest-feathers are all flame-red, with a yellowish buff shaft-line and tip to each plume. In another Malaccan male the postoccipital plumes are dark greyish olive, while the coronal feathers are mixed bright crimson and pale ruddy buff.

The adult male of *H. concretus* (Reinw.), ex Java (Pl. Col. 90, f. 1), differs from *H. sordidus* by having the *entire* crest crimson, although not of so dark a shade as in *H. sordidus*. The occurrence of this species beyond Java rests on no good authority. It is figured by Malherbe (Picae, t. 41, f. 5) under the title of *Micropicus hartlaubi*. The curious fact that in *H. sordidus* ♂, when immature, the *whole* crest is buffy flame-coloured (anyhow the postoccipital crest)—

and that as the bird reaches maturity the flame-coloured postoccipital crest becomes olive-grey, not having been recognized, has led to some confusion.

26. *SASIA ABNORMIS*.

Picumnus abnormis, Temm. Pl. Col. 371. f. 3, "Java" (1825).

Malaccan and Bornean examples in no respect differ from the Sumatran individuals in Mr. Buxton's collection.

27. *LORICULUS GALGULUS*.

Psittacus galgulus, Linn. S. N. i. p. 150 (1766); Raffles, *t. c.* p. 281, "In the interior of Bencoolen."

28. *PSITTINUS INCERTUS*.

Psittacus incertus, Shaw, Nat. Misc.; O. Finsch, Papag. ii. p. 612.

Psittacus malaccensis, Lath., Raffles, *t. c.* p. 281.

The variation in plumage this species undergoes remains still, as when Dr. O. Finsch wrote, not fully explained. Unfortunately the sexes of the four individuals brought home by Mr. Buxton were not determined by dissection.

29. *ANORRHINUS GALERITUS*.

Buceros galeritus, Temm. Pl. Col. 520, "Sumatran" (1831).

["Naked skin surrounding eyes and throat white, with a blue tint. Very common in flights of about eight or ten."—*Buxton*.] Dr. Cantor describes the same parts of the Malaccan bird as being black (Horsf. & Moore, *t. c.* p. 594).

30. *RHYTIDOCEROS UNDULATUS*.

Le Calao à casque festonné, Le Vaill. Ois. Rares, i. p. 41, t. 20, 21, ♀, "Batavia" (1801).

Buceros undulatus, Shaw, Gen. Zool. viii. p. 26 (1811), ex Le Vaill. t. 20, 21; Vigors, App. Mem. Raffles, p. 666 (1830).

Le Calao javan, Le Vaill., *t. c.* p. 45, t. 22, ♂ juv. "Batavia."

Buceros javanicus, Shaw, *t. c.* p. 28 (1811), ex Le Vaill. t. 22.

Le Calao javan ou Calao annuaire, Le Vaill. Ois. d'Afr. t. 239, ♂ adult (1806).

Buceros niger, Vieillot, N. Dict. iv. p. 592 (1816), ex Le Vaill. t. 20, 21.

Buceros annulatus, Dumont, Dict. Sc. Nat. vi. p. 210 (1817), ex Le Vaill. t. 20, 21.

Buceros pusaran, Raffles, t. c. p. 293, ♂ juv., "Sumatra" (1821).

Buceros annulatus, Drapiez, Dict. Class. d'Hist. Nat. iii. p. 32 (1828), ex Levaill. t. 20, 21.

Buceros ruficollis, Vieill. apud Blyth, J. A. S. B. xii. p. 176 (1843), nec Vieill.

Buceros pucoran, Raffles, Blyth, J. A. S. B. 1843, p. 990.

Buceros plicatus, Lath. apud Sundev. Om Le Vaill. Ois. d'Afr. p. 50 (1857), nec Lath.

Calao plicatus (Lath.), Bp. Consp. i. p. 90 (1854), nec Lath.

Rhyticeros plicatus (Lath.), Horsf. & Moore, Cat. E.I. C. Mus. ii. p. 598 (1856-58), nec Lath.; Moore, P. Z. S. 1859, p. 451.

Rhytidoceros obscurus (Gm.), Salvad. Ucc. Born. p. 85, "Sarawak" (1874), nec Gm.

An adult, seemingly an aged male, is in Mr. Buxton's Lampong collection. That gentleman, in his notes, describes the naked gular skin as being yellow, "with a black bar and greenish tinge." This bar is evident on the dried skin. Dr. Cantor has described the gular pouch of the Malaccan male as being "rich gamboge-yellow, with two transverse black bars" (Horsf. & Moore, l. c.*), that of the female as "dirty azure, with two transverse black bars," of the young male as "yellow, with the transverse black bars indistinct." In a Malaccan example of an adult male I find traces of only one black bar. Schlegel (Mus. P.-Bas. *Buceros*, p. 2) states that the Javan bird has an oblique blue bar across the throat of the male, but does not mention any bar on that of the female.

The title of this Hornbill has been by most ornithologists, commencing with Latham, confounded with that of the strictly and only Papuan member of this family, *Buceros ruficollis*, Vieill. The first notice of the Papuan species occurs in Bon-

* In his later account (l. c.) Mr. Moore omits all mention of the two transverse black bars.

tius; and his account was transcribed by Ray in his English translation (1678) of Willughby's 'Ornithology.' By Ray it is called "Bontius his Indian Crow," and is said to come from the "Molucca Islands, especially Banda." An outline drawing of the bill is given (t. lxxviii.), which accurately resembles the bill of an adult example of the Papuan *B. ruficollis*. It may here be mentioned, parenthetically, that while it is not always easy to recognize a species, or to differentiate one from another nearly allied species, through the means of a complete drawing of a bird made at the early date of Ray's edition, still the art of outline-drawing was as perfect then as it is now, and that such delineations are quite reliable. The bold broad folds on the posterior part of the culmen of the bill which characterize the Papuan Hornbill, are plainly and accurately rendered in Ray's plate; and the total absence of lateral grooves and ridges on the basal walls of the two mandibles enables us to determine without doubt that the bill represented belonged to the Papuan, and not to its near ally, the Malayan species.

On Ray's* outline drawing of the bill Latham founded his *Wreathed Hornbill* (Synop. i. p. 358, 1781). Gmelin gave to this species the title of *Buceros obscurus* (S. N. i. p. 362, 1788). In his first supplement to his 'Synopsis,' Latham (p. 70, 1787†) added a reference to a passage in Dampier's 'Voyage' (iii. pt. 2, p. 165‡, t. 3), and identified the bird, there described as having been killed in Ceram and on New Guinea, with his "Wreathed Hornbill." In the 'Index Ornithologicus' (i. p. 146, 1790), Latham gave his "Wreathed Hornbill" a Latin title, and called it *Buceros plicatus*. It seems therefore that the Gmelinian title of *obscurus* and Latham's title of *plicatus* apply to the Papuan

* I have not been able to consult an original copy of Willughby's work. It may be that in it Willughby gives an account of the Hornbill described by Bontius.

† Can any learned bibliographer explain how Latham, in his first Supplement (1787), was able to quote from Gmelin's edition of the 'Systema,' published in 1788?

‡ The correct number of the page is 231, and Latham, as well as J. R. Forster before him, transcribed the misprint on Dampier's plate no. 3.

Hornbill, and not to the Malayan. In the 'General History' (ii. p. 323, 1822) Latham mixed up his original species with Le Vaillant's *Calao javan* (*l. c.*) and Shaw's species founded on Le Vaillant's plate (Ois. d'Afrique); but the plate (xxxiv.) given by Latham plainly refers to the Papuan species.

In D'Entrecasteaux's 'Voyage' (ix. p. 304, t. xi.), a Hornbill obtained in the Papuan island of Waigiou is figured, on which the title of *Buceros ruficollis*, Vieillot (N. Dict. iv. p. 600, 1816), was founded (Temm. Pl. Col. 557). But J. R. Forster had already (Zool. Indica, p. 40, 1781) bestowed the title of *B. plicatus* on Dampier's Ceram Hornbill. Vieillot's title, usually adopted for the Papuan species, therefore ought to fall; and that of *plicatus*, Forster, having priority, should supersede Gmelin's title of *obscurus*, and Latham's title *plicatus*, and stand for the Papuan Hornbill. Gmelin's title *obscurus* and its synonym *plicatus*, Lath., being thus restored to their original owner (i. e. *B. plicatus*, Forster), the oldest available title for the Malayan bird becomes *undulatus*, Shaw.

A form very closely allied to the Malayan *B. undulatus* occurs in Tonghoo, which Mr. Blyth separated (J. A. S. B. 1843, p. 177) under the title of *subruficollis*, the synonymy of the Papuan bird and of the Malayan being at that time exceedingly involved, and the species themselves not well known. Mr. Blyth subsequently twice identified his *B. subruficollis* with Malayan *B. plicatus* (*op. cit.* xii. p. 991, xvi. p. 998), but eventually returned to his original view, and retained *B. subruficollis* as distinct (Cat. Calc. Mus. p. 320, no. 191).

R. subruficollis is only to be distinguished from *R. undulatus* by wanting, in the two sexes, the lateral ridges on the base of both mandibles, and by the bill not being so deep and massive. It does not possess a black transverse bar on the naked gular skin of either sex*, but that part in the male is yellow, and in the female blue, as in *R. undulatus*. It is remarkable that two such closely allied forms should coexist

* Mr. Wardlaw Ramsay, who paid special attention to this Hornbill when in Burma, is quite positive on this point.

in the same area; and yet there seems no doubt that both inhabit Tenasserim; and an example of a young male obtained at Tonghoo by Mr. W. Ramsay belongs to *B. undulatus*, while the remainder of a very large series from that district consist of nothing but *B. subruficollis*. There is little or no difference in the general dimensions, although Mr. Blyth considered that the body of *B. undulatus* was heavier than that of its ally.

B. narcondami, Hume (Str. F. i. p. 411), as described, seems to be another closely allied form. No mention is made of lateral ridges on the mandibles.

31. CARCINEUTES PULCHELLUS.

Dacelo pulchella, Horsf. t. c. p. 175, "Java" (1820).

Carcineutes pulchellus (Horsf.); Sharpe, Mon. Alced. t. 96.

This bird is not separable from Malaccan and Peguan examples.

32. HALCYON PILEATA.

Alcedo pileata, Bodd. Tab. Pl. Enl. p. 41 (1783).

Alcedo atricapilla, Gm.; Raffles, t. c. p. 293, "Sumatra."

33. SAUROPATIS CHLORIS.

Alcedo chloris, Bodd. Tabl. Pl. Enl. p. 49 (1783).

Alcedo chlorocephala, Gm., Raffles, t. c. p. 293, "Sumatra."

34. PELARGOPSIS FRASERI, Sharpe, P. Z. S. 1870, p. 65, "Java, Sumatra, Malacca;" Mon. Alced. t. 33, "Sumatra."

Alcedo leucocephalus, Gm., Raffles, t. c. p. 293, "Sumatra."

The four examples obtained by Mr. Buxton most closely resemble the Bornean form referred by Mr. Sharpe in his monograph to *P. leucocephala*, the cap, however, being more pronounced. They differ from the great majority of Malaccan individuals with which I have made a comparison in wanting the very dark distinct brown cap of that peninsular form. But, in truth, this group of Kingfishers requires further study; for the variations in colouring of the cap, on which Mr. Sharpe partly relies (P. Z. S. 1870, p. 62), do not always seem to offer, as I once believed, stable characters when a large series of individuals from different, or even similar, localities are examined.

35. *ALCEDO EURYZONA*.

Alcedo cyanocephala, Shaw, Raffles, *t. c.* p. 293, "Sumatra," nec Shaw.

Alcedo euryzona, Temm. Pl. Col. livr. 83, "Java" (1830); Sharpe, Mon. Alced. t. 8; Schlegel, Vog. Neder. Ind. *Martins pêcheurs*, p. 45, t. 1. f. 1, 2.

A single example of this rare Kingfisher was obtained by Mr. Buxton. The extreme rarity of the species has prevented me comparing it with typical and Malaccan specimens.

36. *ALCEDO MENINTING*.

Alcedo meninting, Horsf. *t. c.* p. 172, "Java" (1820).

Alcedo asiatica, Sw. Zool. Ill. (1) t. 50 (1821).

Alcedo ispida, var. *bengalensis*, apud Raffles, *t. c.* p. 293, "Sumatra."

Examples of this well-marked species from Java, Borneo, and Malacca agree with those from the Lampong district.

37. *ALCEDO BENGALENSIS*.

Alcedo bengalensis, Gm. S. N. i. p. 450 (1788).

38. *CEYX RUFIDORSA*.

Alcedo tridactyla, Linn., Raffles, *t. c.* p. 293, "Sumatra."

Ceyx rufidorsa, Strickl. P. Z. S. 1846, p. 99, "Malacca;" Sharpe, Mon. Alced. t. 41.

Ceyx innominata, Salvadori, Atti R. Ac. Sc. Tor. iv. p. 465 (1869).

Identical with Malaccan and Bornean examples.

39. *MEROPS SUMATRANUS*, Raffles, *t. c.* p. 294, "Sumatra" (1821).

Merops bicolor, Bodd., Salvadori, Ucc. Borneo, 90, nec Bodd.; Sharpe, Ibis, 1876, p. 33, et 1877, p. 5; conf. Wallden, Tr. Z. S. ix. p. 150, t. 26.

Sumatran, Malaccan, and Bornean examples do not differ. Are not examples with the chestnut plumage, washed with green, immature birds, of both sexes, in transition from the dark green of the young to the full dress of the adult, rather than representatives of the adult female form only, as stated by Mr. Sharpe (*l. c.*)?

40. NYCTIORNIS AMICTA.

Merops amicta, Temm. Pl. Col. 310, "Sumatra" (1824).

Bornean and Malaccan examples in no respect differ. Count Salvadori (*t. c.* p. 91) refers *N. malaccensis*, Cab., to the female, thus assuming that the female wants the crimson pectoral and pink frontal plumes. I rather incline to the belief that the adult birds of both sexes are alike, and that the uniform green birds belong to a younger stage of plumage. One of the examples obtained by Mr. Buxton is in plain green dress (*N. malaccensis*), but has one small frontal plume pink.

41. HARPACTES KASUMBA.

Trogon kasumba, Raffles, *t. c.* p. 282 (1821), *partim*; Gould, Mon. Trog. t. 10.

Malaccan and Bornean examples do not differ. I retain the title now usually adopted, although Sir S. Raffles confounded two species in his description.

42. HARPACTES DUVAUCELI.

Trogon duvaucelii, Temm. Pl. Col. 291 (1824), "Sumatra;" Gould, Mon. Trog. t. 12.

Trogon kasumba, Raffles, *l. c.*, *partim*.

Identical with examples from Malacca, where it occurs along with *H. rutilus* (conf. Walden, Ibis, 1871, p. 161). Sir S. Raffles described (*l. c.*) this species as being the young of *H. kasumba*.

43. BATRACHOSTOMUS CORNUTUS.

Podargus cornutus, Temm. Pl. Col. 159, "Bencoolen" (26 July, 1823).

The example obtained by Mr. Buxton is in full rufous plumage. It agrees with Bornean individuals.

44. LYN Cornis TEMMINCKI.

Lyncornis temmincki, Gould, Icones Avium, t. 6, "Borneo" (1838).

Identical with Malaccan and typical examples.

45. MACROPTERYX COMATUS.

Cypselus comatus, Temm. Pl. Col. 268, "Sumatra" (1824).

Malaccan examples do not differ.

46. MACROPTERYX LONGIPENNIS.

Hirundo longipennis, Rafin. Bull. Sc. Soc. Philom. iii. an. ii. p. 158, "Java" (1804).

Hirundo klecho, Horsf. t. c. p. 143, "Java" (1820).

Identical with typical examples.

47. MEGALÆMA MYSTACOPHANES.

Bucco mystacophanos, Temm. Pl. Col. 315, "Sumatra" (1824); Marshall, Mon. Capit. t. 19; Salvadori, t. c. p. 34, t. 1.

Megalaima humei, Marshall, Ibis, 1870, p. 536, "Borneo;" Mon. Capit. t. 21.

Malaccan examples are identical. Among the large series collected by Mr. Buxton are examples in the transition plumage on which Mr. Marshall founded *M. humei*.

48. MEGALÆMA CHRYSOPOGON.

Bucco chrysopogon, Temm. Pl. Col. 285, "Sumatra" (1824); Marshall, Mon. Capit. t. 18.

Agrees with Malaccan specimens.

49. MEGALÆMA VERSICOLOR.

Bucco versicolor, Raffles, t. c. p. 284, "Sumatra" (1821); Marsh. Mon. Capit. t. 22.

Bornean and Malaccan individuals belong to the typical species.

50. XANTHOLÆMA ROSEA.

Bucco roseus, Dumont, Dict. Sc. Nat. iv. p. 52 (1806); Marshall, Mon. Capit. t. 43.

The two examples collected by Mr. Buxton are identical with Javan and Negros individuals. Hitherto not recorded from Sumatra.

51. XANTHOLÆMA HÆMACEPHALA.

Bucco hæmacephalus, L. S. Müller, Suppl. p. 88 (1776); Marshall, Mon. Capit. t. 42.

Bucco philippensis, Linn., Raffles, t. c. p. 283, "Sumatra."

52. XANTHOLÆMA DUVAUCELI.

Bucco duvaucelii, Less. Tr. d'Orn. 164, "Sumatra" (1831); Marshall, Mon. Capit. t. 33. f. 1, 2.

Bucco australis, Horsf., Raffles, *t. c.* p. 285, "Sumatra," nec Horsf.

Sumatran, Bornean, and N.E. Malaccan examples exhibit no difference.

53. ARACHNOTHERA LONGIROSTRA.

Certhia longirostra, Lath. Ind. Orn. i. p. 299, "Bengal" (1790).

Arachnothera affinis, Blyth, J. A. S. B. 1846, p. 43, "Eastern coast, Bay of Bengal, from Arracan to Malacca, Mysore district.

Arachnothera pusilla, Blyth, Cat. Calc. Mus. App. p. 328. no. 1348 (1849).

Sumatran examples are identical, both in size and plumage, with Javan. The only difference I am able to detect between Javan individuals and those from Malabar, Assam, and countries south to Malacca, including British Burma, and also those from Borneo, is one of dimensions, these last being smaller and having shorter and perhaps slenderer bills. But I possess Javan examples, in perfect plumage, as small as any from the other localities named—that is, with a difference of three, and even nearly four, eighths in the length of the wing of the largest and smallest Javan species. These differences in size may be characteristic of sex; but a fully plumaged Bornean male (Busan), sex ascertained by Mr. Everett, has the short wing of my smallest Javan examples. A Tonghoo male, with bright orange pectoral tufts, has a shorter wing and bill than a Javan male in like breeding-plumage. There is not, therefore, sufficient ground for separating specifically any one or more races of this spider-hunter; and if there were, the Javan and Sumatran race would require the new title, and not the race named *affinis* (subsequently *pusilla*) by Blyth; for it supplied Latham with the type of his *C. longirostra*.

54. ARACHNOTHERA FLAVIGASTRA.

Anthreptes flavigaster, Eyton, P. Z. S. 1839, p. 105, "Malacca."

Arachnothera eytonii, Salvadori, *t. c.* p. 182 (1874).

Identical with typical examples. Count Salvadori has bestowed a fresh title, on account of the hybrid construction of the name given by Eyton.

55. ARACHNOTHERA CHRYSOGENYS.

Nectarinia chrysogenys, Temm. Pl. Col. 388. f. 1, "Java" (1826).

Certhia longirostra, Lath., Raffles, *t. c.* p. 299, "Sumatra," nec Lath.

Sumatran, Bornean (N.E.), and Malaccan examples do not differ.

56. ARACHNOTHERA TEMMINCKI.

Arachnothera temmincki, Moore, Cat. E.I. C. Mus. ii. p. 728, "Malacca?" (1856-58).

One Lampong example, obtained by Mr. Buxton, is inseparable from Malaccan individuals.

57. ARACHNOPHILA SIMPLEX.

Nectarinia simplex, S. Müller, Verh. Nat. Gesch. Ned. Overz. Bez., Land- en Volkenk. p. 172, note, "Sumatra, Borneo" (1843); *op. cit.* Zool. Aves, p. 62, t. 8. f. 4 (1846); Walden, Ibis, 1870, p. 31.

Arachnophila simplex (S. Müller); Salvadori, *t. c.* p. 172.

A single example of this rare Sun-bird (♂) is in the collection. Reichenbach's generic title, *Arachnorphis*, cannot be used, being partly founded on a Malaccan *Arachnothera* (*A. flavigastra*, Eyton) and partly on the New-Ireland *Nectarinia flavigastra*, Gould (= *A. frenata*). *A. simplex*, Müll. & Schlegel, ex Lombock, Gray's Hand-l. no. 1370, is a true *Arachnothera* from Lombock, discovered by Mr. Wallace, and has nothing to do with the species it is there referred to.

58. ÆTHOPYGA SIPARAJA.

Certhia siparaja, Raffles, *t. c.* p. 299, "Sumatra" (1821); Walden, Ibis, 1870, p. 33.

Æthopyga eupogon, Cab. Mus. Hein. i. p. 103, note, "Malacca, Borneo" (1850-51).

The examples from S.E. Sumatra are identical with Malaccan, Pinang, and Bornean specimens. Cabanis's title of *eupogon* must therefore fall.

59. ARACHNECHTHRA PECTORALIS.

Nectarinia pectoralis, Horsf. *t. c.* p. 167, "Java" (1820).
Undistinguishable from Javan examples.

60. ANTHREPTES MALACCENSIS.

Certhia malaccensis, Scopoli, Del. Fl. et Faun. Insubr. ii.
p. 90 (1786).

Nectarinia javanica, Horsf., Raffles, *t. c.* p. 299, "Sumatra."
Apparently very numerous. Does not differ from typical examples.

61. NECTAROPHILA HASSELTII.

Nectarinia hasseltii, Temm. Pl. Col. 376. f. 3, "Java"
(1825).

Certhia brasiliانا auct.

Certhia sperata, Linn., Raffles, *t. c.* p. 298, "Sumatra," nec
Linn.

Cinnyris ruber, Lesson, Tr. d'Orn. p. 296, "Sumatra, *fide*
Pucheran" (1831).

Many examples, which do not differ from Malaccan and
Bornean.

62. CHALCOSTETHA INSIGNIS.

Nectarinia insignis, Jardine, Nat. Lib. xxxvi. p. 274 (1842),
ex Temm. Pl. Col. 138. f. 3, "Java."

Identical with Malaccan individuals, which Count Salva-
dori informs us (*t. c.* p. 178) are not to be distinguished from
Bornean (Sarawak). Sal. Müller has identified Sumatran
with Javan typical examples.

63. DICÆUM FLAMMEUM.

Motacilla flammea, Sparrm. Mus. Carls. fasc. iv. t. 98,
"Java" (1789).

Identical with Javan examples.

64. DICÆUM OLIVACEUM.

Dicæum olivaceum, Walden, Ann. & M. N. H. (ser. 4) xv.
p. 101, Tonghoo hills (1875).

A single skin of a *Dicæum* was obtained by Mr. Buxton
which is identical with the type specimen of *D. olivaceum*.

65. *DICÆUM TRIGONOSTIGMA*.

Certhia trigonostigma, Scopoli, Del. Fl. et Faun. Insubr. ii. p. 91 (1786), ex Sonnerat, "Malacca."

Dicæum croceovenstre, Vigors, Mem. Raffles, p. 673, "Sumatra" (1830).

The Lampong individuals in no respect differ from Malaccan.

66. *PRIONOCHILUS PERCUSSUS*.

Pardalotus percussus, Temm. Pl. Col. 394. f. 2, "Java" (1826).

Identical with Malaccan specimens. I have not been able to compare it with typical examples.

67. *CHALCOPARIA PHÆNICOTIS*.

Motacilla singalensis, Gm. S. N. i. p. 964 (1788).

Nectarinia phænicotis, Temm. Pl. Col. 108. f. 1, 388. f. 2, "Java, Sumatra" (1824).

A single specimen in immature plumage belongs to this species. Now that the knowledge of the geographical range of most species of birds has become so much more defined and accurate, the time appears to have arrived when inappropriate and misleading geographical titles may be with safety suppressed. This bird is certainly not found in Ceylon; nor does it occur on the Asiatic continent to the westward of the Brahmaputra. I have therefore adopted Temminck's title, which is next in priority. It is true that Count Salvadori (Ucc. Born. p. 180) makes *Certhia rectirostris*, Shaw, apply to this species; but that title, founded on plate lxxv. of Vieillot's 'Oiseaux Dorés,' belongs to an African bird, *Cinnyris elegans*, Vieillot (N. Dict. d'Hist. Nat. xxxi. p. 506, 1819), which was also figured by Vieillot under the same title some years later (Galerie des Ois. i. p. 292, t. clxxviii.).

68. *ZOSTEROPS LATERALIS*.

Zosterops lateralis, Temm. Mus. Lugd.; Hartlaub, J. für O. 1865, p. 15, "Java and Sumatra."

Very near to continental *Z. palpebrosus*, but of a more saturated green above, and with a longitudinal streak of bright

yellow on the abdomen ; the tail dark brown. It is also the form found at Malacca.

69. *PARUS ATRICEPS*.

Parus atriceps, Horsf. *t. c.* p. 160, "Java" (1820).

Le Mésange grise à joue blanche, Le Vaillant, Ois. d'Afr. iii. p. 171, t. 139*. fig. superior, "Batavia."

Parus cinereus, Vieill. Tabl. Encyl. Méth. ii. p. 506 (1823), ex Le Vaillant.

Identical with typical examples.

70. *ÆGITHINA SCAPULARIS*.

Iora scapularis, Horsf. *t. c.* p. 152, "Java" (1820) ; Zool. Res. Java, t.

Turdus scapularis, Horsf., Raffles, *t. c.* p. 311, "Sumatra."

A young male, procured by Mr. Buxton, is not separable from Javan examples of the female, except that all the new rectrices are black. Javan and Sumatran females are identical.

71. *ÆGITHINA VIRIDISSIMA*. (Plate V. fig. 1 (♂), 2 (♀).)

Iora viridissima, Bp. Consp. i. p. 397, "Sumatra, Borneo" (1850).

Two full-plumaged males and one female were obtained by Mr. Buxton ; and I am thus enabled to give a description of the female of this somewhat rare species. The upper plumage of the female is like that of the male, only not so dark green. In *Æ. scapularis* ♀, ex Java, and in *Æ. zeylonica* ♀ and *typhia* ♀, the dorsal plumage is yellow-green. The colouring of the rectrices in *Æ. viridissima* ♀ is likewise darker green than in *Æ. scapularis*. Underneath the plumage has a yellow tint, but not so bright and pure as in *Æ. scapularis* and its allies. From the plumage of the head being dark green, the yellow orbits contrast more conspicuously in *Æ. viridissima* ♀ than in the females of the other species. The edgings to all the quills are greenish yellow, and not pure yellow or whitish yellow.

Bornean and Malaccan examples do not differ from the Sumatran.

* Le Vaillant, in error, misnumbered the figures on this plate.

72. PHYLLORNIS VIRIDIS.

Turdus viridis, Horsf. *t. c.* p. 148, "Java" (1820),
nec Gm.

Meliphaga javensis, Horsf. *t. c.* p. 152.

Turdus cochinchinensis, Gm., var., Raffles, *t. c.* p. 309,
"Sumatra."

Chloropsis zosterops, Vigors, App. Mem. Raffles, p. 674,
"Sumatra" (1830).

Malaccan and Bornean individuals do not differ from Sumatran. Although there is no doubt that *M. javensis*, Horsf., refers to this species, for the types were compared (*vide* Horsf. & Moore, Cat. Mus. E.I. C. i. p. 261), still I concur with Count Salvadori in rejecting the name; for it was published without any diagnosis, and the titles of two other very distinct species of *Phyllornis* were given as explanatory synonyms. The description of *T. viridis* has, moreover, precedence in the list, and is perhaps a better title than *javensis*, which tends to circumscribe the geographical range. Count Salvadori, however, passes over the title of *viridis* also, and adopts that of *sonneratii*, Jard. & Selby.

73. PHYLLORNIS ICTEROCEPHALA.

Turdus cochinchinensis, Gm., Raffles, *t. c.* p. 309, "Sumatra."

Phyllornis malabaricus, Gm., Temm. Pl. Col. 512. f. 2,
"Sumatra" (1829).

Phyllornis icterocephalus, Lesson, Rev. Zool. 1840, p. 164,
ex Temm.

Malaccan individuals offer no points of difference. But a Bornean male from Simanjou has the blue of the shoulders of a perceptibly darker shade, and belongs to *P. viridinucha*, Sharpe, a species the validity of which I am somewhat doubtful of.

74. PHYLLORNIS CYANOPOGON.

Phyllornis cyanopogon, Temm. Pl. Col. 512. f. 1, "Sumatra" (1829).

Specimens from Malacca are not separable. *P. mystacalis*,

Sw. (2 $\frac{1}{4}$ Cent. p. 296), is either the female or young male of this species.

75. *IXUS ANALIS*.

Turdus analis, Horsf. *t. c.* p. 147, "Java" (1820); Raffles, *t. c.* p. 310, "Sumatra."

Otocompsa personata, Hume, Str. F. 1873, p. 456, "Acheen."

Inseparable from typical specimens, and identical with Malaccan and Bornean examples.

76. *CRINIGER PHÆOCEPHALUS*.

Ixos phæocephalus, Hartl. Rev. Zool. 1844, p. 401, "Malacca;" Walden, Ibis, 1871, p. 169, t. vi. f. 2.

Sumatran and typical examples are identical.

77. *TRICHOLESTES CRINIGER*.

Brachypodius (?) *criniger*, A. Hay, Blyth, J. A. S. B. 1845, p. 577, "Malacca."

Tricophorus minutus, Hartlaub, J. für O. 1853, p. 156, "Malacca."

Tricholestes minutus (Hartlaub), Salvadori, *t. c.* p. 265, t. v. f. 1, "Sarawak" (1874).

Mr. Buxton procured one specimen, which in no way differs from Sarawak individuals. Why has Count Salvadori (*l. c.*) preferred Hartlaub's title, *minutus*, for the Malaccan bird to mine of *criniger*, published seven years previously?

78. *ALCURUS OCHROCEPHALUS*.

Turdus ochrocephalus, Gm. S. N. i. p. 821 (1788); Walden, Ibis, 1872, p. 379.

79. *RUBIGULA DISPAR*.

Turdus dispar, Horsf. *t. c.* p. 150, "Java" (1820); Raffles, *t. c.* p. 310, "Sumatra;" Temm. Pl. Col. 137.

80. *BRACHYPUS EUPTILOSUS*.

Brachypus euptilosus, Jard. & Selby, Ill. Orn. t. iii., "Singapore" (1825?).

Malaccan examples do not differ.

81. *BRACHYPUS PLUMOSUS*.

Pycnonotus plumosus, Blyth, J. A. S. B. 1845, p. 567, ♂, "Singapore."

Pycnonotus brunneus, Blyth, *t. c.* p. 568, ♀, "Malacca."

Brachypus modestus, A. Hay; Blyth, *t. c.* p. 568, ♀, "Malacca."

The single example in Mr. Buxton's collection is passing from the brown plumage of the immature *B. brunneus* to the greener plumage of the adult. Count Salvadori (*t. c.* p. 199) states that the brown birds are females and young males, while the adult males are distinguished by the green colouring of the wings and tail. In a large series of the species, with sexes ascertained by dissection, and collected at Malacca by Mr. W. Ramsay, I find females fully as green in plumage as males. An example collected by Mr. Maingay at Malacca, with green wings and tail, is marked by that collector as being a female; and he was a most competent authority. A large series from Java consists of examples undistinguishable from Malaccan. Labuan individuals also belong to the same species.

Pycnonotus pusillus, Salvadori (*t. c.* p. 200) seems to be the bird described by Moore under the title of *Microtarsus olivaceus* (Cat. E.I. C. Mus. i. p. 249), ex Malacca, where it is not uncommon. I have compared Bornean examples and can detect no difference.

82. BRACHYPODIUS MELANOCEPHALUS.

Lanius melanocephalus, Gm. S. N. i. p. 309. no. 51 (1788).

Turdus melanocephalus, Raffles, *t. c.* p. 310, "Sumatra" (1820).

Brachypodius immaculatus, Sharpe, Ibis, 1876, p. 39, "Sibu, Borneo."

Identical with Malaccan and Bornean individuals; all the rectrices with a dark transverse band. *B. immaculatus*, Sharpe, cannot be separated.

83. IOLE OLIVACEA.

Iole olivacea, Blyth, J. A. S. B. 1844, p. 386, "Malacca."

A single Sumatran example of a bird was obtained by Mr. Buxton, which agrees well with the Malaccan form I refer to *Iole olivacea*, Blyth.

84. *ORIOLOUS XANTHONOTUS*.

Oriolus xanthonotus, Horsf. *t. c.* p. 152, "Java" (1820); Zool. Res. Java, t. 46.

Javan, Sumatran, Malaccan, and Bornean examples exhibit no specific differences.

85. *ORIOLOUS CORONATUS*.

Oriolus chinensis, Linn., Raffles, *t. c.* p. 303, "Sumatra," nec Linn.

Oriolus coronatus, Sw. 2 $\frac{1}{4}$ Cent. p. 342, "Java" (1837).

Mr. Buxton obtained a large series, which are identical with typical examples.

86. *CYANODERMA ERYTHROPTERUM*.

Timalia erythroptera, Blyth, J. A. S. B. 1842, p. 794, "Singapore."

Timalia pyrrhophæa, Hartl. Rev. Zool. 1844, p. 402, "Sumatra."

On comparing examples obtained at the foot of Mount Ophir, Malacca, by Mr. W. Ramsay, who carefully, by dissection, ascertained the sexes, I can find no difference of plumage whereby the male can be distinguished from the female.

87. *MACRONUS PTILOSUS*.

Macronus ptilosus, Jard. & Selby, Ill. Orn. t. 150 (1835).

Timalia trichorros, Temm. Pl. Col. 594. f. 1, "Borneo, Sumatra" (1836).

Malaccan, Bornean, and Sumatran examples belong to one species.

88. *BRACHYPTERYX BUXTONI*. (Plate VI. fig. 2.)

Brachypteryx buxtoni, Tweeddale, P. Z. S. 1877 (April 17th).

89. *DRYMOCATAPHUS NIGRICAPITATUS*.

Brachypteryx nigrocapitata, Eyton, P. Z. S. 1839, p. 103, "Malacca."

The Sumatran bird in no way differs from the type species.

90. MALACOPTERON MAJUS.

Malacopteron majus, Blyth, J. A. S. B. 1847, p. 461, "Malacca;" Salvadori, Ucc. Born. p. 225.

Napothera pileata, Müll., Bp. Consp. i. p. 359, "Sumatra, Borneo" (1850).

Sumatran and Malaccan examples are identical; and I may add that examples of the nearly allied *M. magnum*, Eyt., from Sumatra and Malacca, in my collection in no way differ.

91. PITTA BOSCHII.

Pitta boschii, Müll. & Schl. Verhandl. Nat. Gesch. Ned. Ind. Aves, pp. 5, 16, t. 1, "Sumatra" (1839-44).

There are no specific differences between Malaccan and typical examples.

92. CITTOCINCLA MACROURA.

Turdus macrourus, Gm. S. N. i. p. 820 (1788).

The Sumatran examples do not differ from Malaccan, Javan, Burman, Indian, Ceylonese, and Hainan individuals.

93. COPSYPHUS MUSICUS.

Lanius musicus, Raffles, t. c. p. 307, "Sumatra" (1821); Walden, Ibis, 1872, p. 102.

Copsychus problematicus, Sharpe, Ibis, 1876, p. 36, "Borneo."

Some years ago (*l. c.*) I endeavoured to show that the Malayan and Javan *Copsychus*, belonging to the *C. saularis* section, differed from *C. saularis* in having the under wing-coverts "white centred with black;" and I suggested that, as the Sumatran species would in all probability be found to agree with them, they would fall under the title of *musicus*, given by Sir S. Raffles to the Sumatran Dayal. Comparing the specimens obtained by Mr. Buxton, I find that this surmise was correct. They also possess only six pairs of white rectrices, as against eight in true *C. saularis*—a character which is almost constant in Malaccan birds also.

The Javan race has a very short bill, but is otherwise identical with Sumatran *C. musicus*. Swainson long ago (2 $\frac{1}{4}$ Cent. p. 292) distinguished it under the title of *brevirostris**. Mr.

* Erroneously identified with *C. amoenus* in Horsfield & Moore's Catalogue.

Sharpe (*l. c.*) has recently bestowed a new title, *problematicus*, on the Bornean form, giving as its distinctive character the black-centred under wing-coverts.

94. *HENICURUS FRONTALIS*.

Enicurus frontalis, Blyth, J. A. S. B. 1847, p. 156, "Malacca;" Elwes, Ibis, 1872, p. 259, t. ix.

Hitherto only recorded as inhabiting Malacca. Closely allied to *H. leschenaulti*, but of smaller dimensions. In one of Mr. Buxton's examples the white tips of the fourth pair of outer rectrices overlap the black portion of the third outer pair. In another individual the fourth pair is much shorter, and the white bars on the tail appear as represented in Mr. Elwes's plate. Both birds are otherwise alike and in full plumage, the frontal plumes being much developed and fully equalling, if not exceeding, the frontal crest of Javan *H. leschenaulti*.

In all Ningpo examples of fully plumaged specimens of *H. leschenaulti* (*E. chinensis*) I have examined, the outer pair of tail-feathers are about an inch shorter than the second pair, whereas in typical (Javan) *H. leschenaulti*, the outer pair equals the next pair; and this holds good in individuals from the Dafla hills and Tenasserim. The Javan bird is also considerably smaller than the Chinese species.

95. *CALOBATES MELANOPE*.

Motacilla melanope, Pallas, It. iii. p. 696 (1776).

Motacilla bistrigata, Raffles, *t. c.* p. 312, "Sumatra" (1821).

96. *BUDYTES VIRIDIS*.

Motacilla viridis, Gm. S. N. i. p. 962 (1788).

97. *CORYDALLA MALAYENSIS*.

Anthus malayensis, Eyton, P. Z. S. p. 104, "Malacca."

(?) *Anthus hasseltii*, Temm.; Schlegel, Handleiding Dierk. i. p. 263, "Java" (1857).

Alauda pratensis, Linn., apud Raffles, *t. c.* p. 315, "Sumatra," nec Linn.

One Sumatran example is in the collection, and does not differ from the common Malaccan *C. malayensis*. Count Salvadori has suggested that *C. hasseltii* = *C. malayensis*; but

the former is more nearly allied to *C. lugubris*, if the Bornean specimen marked *C. hasselti* in the British Museum is correctly determined.

Corydalla lugubris, Walden, differs from *C. malayensis* in having white superciliary patches before the eye, in the breast-markings consisting of a few sparse narrow brown lines, and not broad brown centres to the feathers, and in the ground-colour of the breast being albescent, and not pale rufous. Above, the colouring and markings of the two species are very similar.

98. PRINIA FAMILIARIS.

Prinia familiaris, Horsf. *t. c.* p. 165, "Java" (1820); Zool. Res. Java, t. 52.

Motacilla olivacea, Raffles, *t. c.* p. 313, "Sumatra" (1821).

Mr. Buxton's Sumatran examples are identical with typical specimens. One of the Sumatran birds possesses white lores. The species also occurs in the island of Madura.

99. PRINIA RAFFLESII, sp. nov. (Plate VI. fig. 1.)

Mr. Buxton's collection contains two examples of a species of *Prinia* I am unable to identify. It may be the same as *M. olivacea*, Raffles (*l. c.*); but that bird has been determined by Horsfield and Moore (*Mus. E.I. C. i.* p. 320) to be *P. familiaris*.

Above olive-green, front of head ashy. Lores, which extend partly over the eye, white. Chin, throat, cheeks, and upper breast white. Lower breast, abdomen, flanks, ventral region, and under tail-coverts pure canary-yellow. Thigh-coverts yellow, tinged with ferruginous. Carpal edge and under carpal coverts yellow-white. Quills brown, with olive-green edgings. Rectrices pale brown, washed with green, and with an obscure darker brown subterminal spot and pale tips. Bill black and slender as compared with that of *P. familiaris*. Bill from forehead 0·72, wing 1·18, tarsus 0·75, tail 2·50.

Differs from *P. familiaris* in wanting the conspicuous white tips to the minor and major wing-coverts, in being darker olive-green above, in the olive-green fringes of the quills

and colouring of the rectrices, in wanting a distinct brown cap, and in the brown subterminal tail-bands being indistinct and obscure, and the pale apical bands being narrower and ill defined. It is more nearly allied to *P. flaviventris*, but differs in having a longer stouter bill, by being of a much darker, less yellow, green above, and by the possession of subterminal brown spots on the rectrices, a character which is seemingly never present in *P. flaviventris*. I have compared it with twenty examples of *P. flaviventris* from localities ranging from Rangoon to Bootan, and with nine specimens of *P. familiaris*.

100. *ORTHOTOMUS CINERACEUS*.

Orthotomus cineraceus, Blyth, J. A. S. B. xiv. p. 589, "Malacca" (1845).

Orthotomus sepium, Horsf., var. ex Sumatra, Temm. Recueil d'Ois. livr. 101.

Orthotomus borneoënsis, Salvadori, t. c. p. 247, "Sarawak" (1874); Sharpe, Ibis, 1876, p. 41, t. ii. f. 1; idem. op. cit. 1877, p. 116.

Sumatran individuals do not differ from typical and Bornean examples. True *O. sepium* extends to the island of Madura. *O. edela* is the Javan form of *O. sutorius*, but wants the white lores and superciliary stripe of the continental species.

101. *GRAUCALUS SUMATRENSIS*.

Ceblepyris novæ-guineæ, S. Müll. Verhand. Land- en Volkenk. p. 190, nec Lath.

Ceblepyris sumatrensis, S. Mull. t. c. p. 191, "Sumatra" (1829-44).

Graucalus concretus, Hartl. J. f. O. 1864, p. 445, "Borneo."

Identical with Malaccan and Bornean examples. None of the birds obtained by Mr. Buxton, old males included, possess a black lorum and ocular stripe.

102. *VOLVOCIVORA CULMINATA*.

Ceblepyris culminatus, A. Hay, Madr. J. L. & Sc. xiii. p. 157, "Malacca" (1844).

Volvocivora schierbrandi, v. Pelzeln, "Novara," p. 80, t. 2. f. 1 (1865).

Volvocivora borneoënsis, Salvad. Atti R. Ac. Sc. Tor. iii. p. 532 (1868).

Bornean, Sumatran, and typical examples in plumbeous-coloured plumage do not differ.

103. LALAGE DOMINICA.

Turdus dominicus, L. S. Müller, Suppl. p. 145 (1776).

Turdus terat, Bodd. Tabl. Pl. Enl. p. 17 (1783).

Lanius striga (Horsf.), Raffles, *t. c.* p. 305 "Sumatra" (1821).

104. HEMIPUS OBSCURUS.

Muscicapa obscura, Horsf. *t. c.* xiii. p. 146, "Java" (1820); Zool. Res. Java, t. 39. f. 2.

Lanius no. 12, Raffles, *t. c.* p. 308, "Sumatra."

Malaccan, Sumatran, and typical examples are alike.

105. ARTAMUS LEUCORHYNCHUS.

Lanius leucorhynchus, Linn. Mantissa Plant. p. 524, "Mantilla" (1771); Raffles, *t. c.* p. 306, "Sumatra."

Does not differ from typical examples.

106. DISSEMURUS PLATURUS.

Le Drongo à raquette, Le Vaillant, Ois. d'Afr. iv. p. 73, t. 175 (1805).

Dicrurus platurus, Vieillot, N. Dict. d'Hist. Nat. ix. p. 558 (1817), ex Le Vaill.

Lanius malabaricus, Lath., Raffles, *t. c.* p. 306, "Sumatra," nec Lath.

Edolius retifer, Temm. Rec. d'Ois. livr. 30, sub *Edolius remifer*, "Malacca, Java, Sumatra" (1823), partim, ex Le Vaill.

(?) *Edolius intermedius*, Less. Tr. p. 380, "des Moluques," (1831).

Edolius rangoonensis, Gould, P. Z. S. 1836, p. 5, "Rangoon;" J. & S. Illustr. Orn. t. xxxviii. (1840), ex Gould.

Edolius malayensis, Blyth, Jerd. B. Ind. i. p. 438 (1862).

Four examples of the genus *Dissemurus* contained in Mr. Buxton's collection cannot be separated from the crestless Malaccan species. But the difficult question arises, What is the correct title of the Malaccan Racket-tailed

Drongo? Sumatra, Borneo, and Malacca are the only three areas, so far as is now known, which are inhabited by full-plumaged birds devoid of a frontal crest; but Sonnerat figured and described a species of *Dissemurus* without a crest from the Malabar coast (Voy. Indes, ii. p. 195, t. 111). On this Scopoli founded the title of *Muscicapa malabarica* (Del. Fl. Faun. Insubr. ii. p. 96, 1786), and later on Latham the title of *Lanius malabaricus* (Ind. Orn. i. p. 66, 1790). It has consequently been contended by some authors that Sonnerat described from and figured a Malaccan bird, and that therefore the title of *malabaricus* does not belong to the Malabar bird; by others (*e. g.* Temminck, *l. c.*), that the Malabar bird belonged to the same species as the Javan and Sumatran; and as the title of *malabaricus* was inappropriate, Temminck altered the name to *retifer* (*lege setifer*), a title restricted by recent authors to the Javan crested bird. Sonnerat's figure, from whatever species it may have been taken, is, without doubt, most inaccurate; and Le Vaillant (*l. c.*) severely criticised it; but Sonnerat distinctly leaves it to be understood that his type was from the Malabar coast; and Buffon (Hist. Nat. iv.) alludes to Sonnerat having sent him the bird from the coast of Malabar, Sonnerat (*l. c.*) stating that the bird he describes and figures is the one he sent to Buffon. The crest in adult Malabar birds is not largely developed; and it is quite possible that Sonnerat figured a young bird, or else that he overlooked the short impending nasal plumes. Le Vaillant (*l. c.*) was the next author who wrote on a species of Racket-tail Drongo; and he gave a description and plate of a crestless species of *Dissemurus*. The origin of his type it is now impossible to discover; for he merely tells us that it came from the collection of a Mons. Dorey. The description and plate most accurately represent the Malaccan and Sumatran form; and as Vieillot founded his title of *platurus* (*l. c.*) on Le Vaillant's description and plate, I adopt it for that species. It could not well have been taken from a Javan; for that race is crested, and great care is exhibited in the drawing.

The only other crestless form inhabits Borneo, and was separated by Temminck under the title of *brachyphorus* (Bp.

Consp. i. p. 351). Count Salvadori (*t. c.* p. 154) somewhat doubts the propriety of separating the Bornean from the Malaccan *Dissemurus*; but the much smaller spatulate termination of the outer pair of rectrices seems to be a constant character in the adults of the Bornean species; and I have examined a very large series, both at Leiden and in my own collection, from Labuan, Sarawak, and Banjarmassing. Rangoon adult birds have a crest, and belong to true *D. paradiseus*.

107. *CHAPTIA MALAYENSIS*.

Chaptia malayensis, A. Hay, J. A. S. B. 1846, p. 294, "Malacca;" Walden, J. A. S. B. 1875, extra number, pt. ii. p. 128.

Edolius picinus, S. Müller, Bp. Consp. i. p. 352, "Sumatra" (1854).

Malaccan and Sumatran individuals do not differ.

108. *BUCHANGA LEUCOPHÆA*.

Dicrurus leucophæus, Vieillot, N. Dict. d'Hist. Nat. ix. p. 587 (1817).

Edolius cineraceus, Horsf. *t. c.* p. 145, "Java" (1820).

Javan and Sumatran examples are identical.

109. *PERICROCOTUS ARDENS*.

Turdus flammeus (Gm.), Raffles, *t. c.* p. 310, "Sumatra."

Phœnicornis ardens, "Boie," Mus. Lugd.; Bp. Consp. i. p. 357, "Sumatra" (1850); Salvad. *t. c.* p. 143, t. ii. f. 1, 2.

Pericrocotus flammifer, Hume, Str. F. iii. p. 321, note, "Mergui" (1875).

Bornean and Malaccan examples agree with typical. Horsfield and Moore (Cat. E.I. C. Mus. ii. p. 142) refer *T. flammeus*, apud Raffles, and *P. ardens* to *P. xanthogaster*.

110. *PERICROCOTUS PEREGRINUS*.

Parus peregrinus, L. S. N. i. p. 342 (1766).

One specimen, seemingly belonging to this species, was obtained by Mr. Buxton; but as it is in immature plumage it is difficult to determine with certainty.

111. *PERICROCOTUS XANTHOGASTER*.

Lanius xanthogaster, Raffles, *t. c.* p. 309, "Sumatra" (1821).

The small section of the *Pericrocotidæ* of which *P. flam-*

meus may be considered the type, is represented both in Sumatra and Java by a race which it may perhaps be proper to separate as a distinct species. Of this form two representatives are contained in Mr. Buxton's collection. It is a smaller bird than *P. flammeus*, and it differs in the orange edgings of the outer webs of some of the secondaries uniting with the orange-coloured mark lower down, as is to be found in *P. brevirostris*. The female of this form appears to have supplied the type of *Lanius xanthogaster*, Raffles.

112. PHILENTOMA PYRRHOPTERUM.

Muscicapa pyrrhoptera, Temm. Pl. Col. t. 596, "Sumatra, Borneo" (1836).

Examples from Borneo and Malacca perfectly agree with the one obtained in the Lampong district by Mr. Buxton.

113. HYPOTHYMIS AZUREA.

Muscicapa azurea, Bodd. Tabl. Pl. Enl. p. 41 (1783).

Muscicapa cærulea, Gm., Raffles, t. c. p. 312, "Sumatra."

114. MUSCIPETA AFFINIS.

Tchitrea affinis, A. Hay, J.A.S.B. 1846, p. 292, "Malacca." Sumatran specimens similar to typical.

115. CYORNIS ELEGANS.

Muscicapa elegans, Temm. Pl. Col. 596, f. 1, "Sumatra" (1836).

The species obtained by Mr. Everett at Marup, in North Borneo, and provisionally identified by me with *C. elegans* (Ibis, 1872, p. 373), is not to be specifically distinguished from the typical example in Mr. Buxton's collection.

116. LEUCOCERCA JAVANICA.

Muscicapa javanica, Sparrm. Mus. Carls. fasc. iii. t. 75, "Java" (1789); Raffles, t. c. p. 312, "Sumatra."

Agrees with typical and Malaccan specimens.

117. HIRUNDO JAVANICA.

Hirundo javanica, Sparrm. Mus. Carls. fasc. iv. t. 100, "Java" (1789).

Neilgherry examples (*H. domicola*, Jerd.) cannot be separated.

118. CYMBORHYNCHUS MACRORHYNCHUS.

Todus macrorhynchus, Gm. S. N. i. p. 446 (1788).

Eurylaimus lemniscatus, Raffles, *t. c.* p. 296, "Sumatra" (1821).

Cymborhynchus malaccensis, Salvadori, Atti R. Ac. Sc. Tor. ix. p. 425, "Malacca" (1874).

Six examples are in Mr. Buxton's collection, and they all possess the three outer pair of rectrices more or less marked with white on their inner webs. Therefore, according to Count Salvadori's view, the Sumatran bird should fall under *C. malaccensis*, Salvad. But if the Sumatran and Malaccan birds are really specifically distinct from the Bornean, and if the Bornean is the true Great-billed Tody of Latham, a title already exists in *lemniscatus*, Raffles; and that of *malaccensis*, Salvadori, is, in any case, unnecessary.

119. CALYPTOMENA VIRIDIS.

Calyptomena viridis, Raffles, *t. c.* p. 295, "Singapore, Sumatra" (1821).

Raffles affirms that the sexes do not differ; but this statement has not been supported by recent research (conf. Salvadori, *t. c.* p. 107). The species inhabits the Malay peninsula and Borneo, specimens from these regions not differing from Sumatran.

120. EURYLÆMUS OCHROMELAS.

Eurylaimus ochromalus, Raffles, *t. c.* p. 297, "Sumatra and Singapore" (1821).

Bornean, Pinang, and Malaccan individuals are not to be distinguished from Sumatran.

121. CORYDON SUMATRANUS.

Coracias sumatranus, Raffles, *t. c.* p. 303, "Sumatra" (1821).

Birds from Karen hills, Tenasserim, Malacca, and Borneo exhibit no departure from the typical examples obtained by Mr. Buxton.

122. PADDA ORYZIVORA.

Loxia oryzivora, Linn. S. N. i. p. 302 (1766).

123. MUNIA MAJA.

Loxia maja, Linn. S. N. i. p. 301 (1766).

Count Salvadori (*t. c.* p. 265) has controverted a suggestion of mine that this bird is replaced in Java by *M. ferruginea* (Sparrm.)=*M. majanoides*, Temm., on the ground that an undoubted example was obtained in Java by the "Magenta" Expedition. This evidence, however, appears hardly sufficient; for hundreds of Munias of almost every species may be bought at the different ports in the east, far away from their origin.

124. MUNIA LEUCOGASTROIDES.

Munia leucogastroides, Moore, Cat. E.I. C. Mus. ii. p. 510. no. 777, "Java" (1856-58); Walden, Ibis, 1874, p. 145.

The Sumatran examples do not differ from Javan.

125. PLOCEUS MACULATUS.

Loxia maculata, L. S. Müller, Suppl. p. 150. no. 56 (1776).

Loxia philippina, Linn. S. N. i. p. 305 (1766); Walden, Tr. Z. S. ix. p. 209.

Ploceus baya, Blyth, J. A. S. B. xiii. p. 945.

Mr. Buxton's collection only contains examples of females or non-breeding males of the Malayan race of *P. baya*, Blyth. As there seems to be little doubt that the species does not occur in the Philippines, I have adopted the next published title.

126. PLATYSMURUS LEUCOPTERUS.

Glaucopis leucopterus, Temm. Pl. Col. 265, "Sumatra" (1824).

Malaccan examples are identical.

127. CRYPSIRHINA VARIANS.

Corvus varians, Lath. Ind. Orn., Suppl. p. 26, "Java" (1801).

Examples from Burma, Java, and Sumatra are of one species.

128. CALORNIS CHALYBÆA.

Turdus chalybæus, Horsf. *t. c.* p. 148, "Java" (1820).

Lanius insidiator, Raffles, *t. c.* p. 307, "Sumatra" (1821).

Javan, Malaccan, and Bornean individuals are not specifically separable from those obtained in South-east Sumatra.

129. STURNOPASTOR CONTRA.

Sturnus contra, Linn. S. N. i. p. 290 (1766).

Pastor jalla, Horsf. t. c. p. 155, "Java" (1820).

Javan and these Sumatran examples are not separable from the Indian and Burman forms.

130. GRACULA JAVANENSIS.

Corvus javanensis, Osbeck, Voy. China & E. Ind. i. p. 157, "Java" (Eng. Tr. 1771).

Gracula religiosa, Linn.; Raffles, t. c. p. 303, "Sumatra."

The Sumatran examples from Lampong district are identical with others from East Java.

131. CORVUS VALIDUS.

Corvus validus, Temm., Bp. Consp. i. p. 385 (1854).

Malaccan and Sumatran birds do not differ.

We must accept Prof. Schlegel's assurance (Bijdr. t. d. Dierk. pp. 8 and 13, and Mus. Pays-Bas, *Coraces*, p. 29) that Prince Bonaparte did not describe the Gilolo (Halmahera) bird under the title of *C. validus*, but the Bornean and Sumatran and Timor (?) species. Still the Prince's words (*l. c.*), "*rostro capite multo longiore, valido, curvato*," read as if he were describing the Gilolo species, subsequently entitled *C. validissimus* by Schlegel. Little is known of the *C. validus*, as the learned Professor tells us (*l. c.*); and consequently its range has not been well defined. The Sumatran bird is identical with one of the Malaccan Crows; and Professor Schlegel identified Bornean examples with the Sumatran. He further gives the island of Timor as its habitat, and asserts that *C. timorensis*, Bp., is but a synonym. But, by the context, the Prince appears to have bestowed this title on *C. macrorhynchus*, Temm. apud Wagler, which is the only species of *Corvus* enumerated by Mr. Wallace in his list of Timor birds. Professor Schlegel, it is true, includes Timor within the range of *C. validus* only on the strength of a single example (♀) brought from there by S. Müller, which may well have been but an imperfectly grown example of *C. macrorhynchus*. The *C. validus*, var., of Wallace, ex Sula Islands (P. Z. S. 1862, p. 343), is certainly only a race of *C. enca*, a species

apparently confined to Java, Celebes, and the Sula Islands ; and *C. annectens*, Brüggemann, ex Celebes (Abhandl. naturwissenschaft. Ver. Bremen, p. 64. no. 89), is not of the same type as *C. enca*. *C. corax*, apud Raffles (*l. c.*), has been referred by Wagler, Schlegel, and others to *C. macrorhynchus* ; but there is no evidence whatever that that species inhabits Sumatra, and it is much more probable that Sir Stamford alluded to *C. validus*. Blyth (*Ibis*, 1870, p. 171) made the extraordinary identification of *C. macrorhynchus*, Temm., with *C. culminatus*, Sykes. In the Javan bird the bill is full three inches in length, and the basal portion of the body-plumage is pure white. Mr. Blyth has also stated that *C. culminatus* extends to Malacca (Cat. Calc. Mus. p. 89. no. 448 ; *Ibis*, 1863, p. 368), and that there also occurs *C. macrorhynchus*, Vieillot*. This last species Mr. Blyth identified with *C. tenuirostris*, Moore, ex Bombay, but which Mr. Blyth (*l. c.*) asserts was founded on a Malaccan skin. Two Malaccan examples (mus. nostr.) belong to *C. tenuirostris* ; and I am not prepared off-hand to identify them with *C. validus*. Their chief character is the form of the bill. In *C. validus* the bill gradually and regularly diminishes from the base to the apex, and is much bulged throughout the course of the commissure. The culmen is rather acute than broad and rounded, and the height of the bill is considerable†. In *C. tenuirostris* the bill is longer, very much compressed, and flattened on the sides ; the culmen is broad and rounded, and not acute. The height is also less, 0·70 as against 0·91. The length of the gonys is greater. In colouring, the lower plumage is of a more ashy tint ; and the general dimensions are less. The base of the feathers is white, as in *C. validus*. The British Museum possesses examples of *C. tenuirostris* from both Borneo (Banjarmassing and Labuan) and Sumatra.

* What is *C. macrorhynchus*, Vieillot ? I cannot find that Vieillot ever bestowed such a title, although Jerdon, Blyth, and Bonaparte have all used it. Mr. Blyth is clearly referring to *C. validus* ; for later (*Ibis*, 1870, p. 171) he identified *C. tenuirostris* with *C. validus*.

† The contour of the bill of *C. validus* is very much that of *C. levilanti* (*C. culminatus*) ; but the culmen is not quite so much arched.

Corvus validus.

	Wing.	Tail.	Bill from nostril.	Gonys.	Tarsus.
Lampong.....	12·80	8·75	1·75	1·00	2·37
„	12·75	8·62	1·62	0·87	2·30
Malacca	12·75	8·50	1·62	1·00	2·25

Corvus tenuirostris.

Malacca	12·50	7·00	1·75	1·18	2·00
„	12·25	7·00	2·12	1·25	2·00

132. TRERON NIPALENSIS.

Columba curvirostra, Gm., Raffles, *t. c.* p. 318, "Sumatra."

Toria nipalensis, Hodgs. As. Res. xix. p. 164, "Nipaul" (1836).

Treron nasica, Schlegel, Nederl. Tijdschr. Dierk. i. p. 67, "Borneo" (1863).

Assam, Sumatran, and Malaccan examples are identical.

133. BUTRERON CAPELLEI.

Columba capellei, Temm. Pl. Col. 143. "Java" (1823).

Vinago gigantea, Vigors, App. Mem. Raffles, p. 674, "Sumatra" (1830).

Malaccan individuals do not differ. Raffles does not appear to have ever published the title of *Columba gigantea* attributed to him by Mr. G. R. Gray (*Columbæ*, B. Mus. p. 13).

134. OSMOTERON VERNANS.

Columba vernans, Linn. Mantissa, p. 526, "Philippines" (1771); Raffles, *t. c.* p. 318, "Sumatra;" Walden, Tr. Z. S. ix. p. 210.

Treron griseicapilla, Schlegel, Nederl. Tijdschr. Dierk. i. p. 70, "Sumatra, Bangka" (1863).

Notwithstanding Professor Schlegel's remarks (*l. c.*), I am unable to detect any specific difference between Sumatran and typical examples.

135. OSMOTRERON OLAX.

Columba olax, Pl. Col. 241. "Sumatra" (1823).

Sumatra supplied the type of this species; and Malaccan examples in no way differ.

136. *SPILOPELIA TIGRINA*.

Columba tigrina, Temm. Knip, Fig. t. 43 (1811).

The S.E. Sumatran examples do not differ from Javan, Malaccan, Bornean, and Celebean individuals. Temminck has left us in doubt as to the origin of the bird figured by Madame Knip.

137. *GEOPELIA STRIATA*.

Columba striata, Linn. S. N. i. p. 282 (1766).

Columba bantamensis, Sparrm., Raffles, t. c. p. 319, "Sumatra."

138. *CHALCOPHAPS INDICA*.

Columba indica, Linn. S. N. i. p. 284 (1766).

Columba javanica, Gm., Raffles, t. c. p. 317, "Sumatra."

139. *ARGUSIANUS ARGUS*.

Phasianus argus, Linn. S. N. i. p. 272 (1766); Raffles, t. c. p. 320, "Sumatra."

Sumatran and Malaccan birds do not differ.

140. *ROLLULUS ROULOUL*.

Phasianus rouloul, Scopoli, Del. Fl. Faun. Insubr. ii. p. 93, "Malacca" (1786).

Tetrao viridis, Gm., Raffles, t. c. p. 322, "Sumatra."

Identical with Bornean and typical examples.

†141. *CHARADRIUS FULVUS*.

Charadrius fulvus, Gm. S. N. i. p. 687 (1788).

Charadrius pluvialis, var., Raffles, t. c. p. 328, "Sumatra."

142. *ÆGIALITES GEOFFROYI*.

Charadrius geoffroyi, Wagler, Syst. Av. *Charadrius*, no. 19 (1827); Harting, Ibis, 1870, p. 378, t. xi.

143. *GLAREOLA ORIENTALIS*.

Glareola orientalis, Leach, Tr. L. S. xiii. p. 132, t. 13. f. 1, 2, "Java" (1820).

144. *TRINGOIDES HYPOLEUCUS*.

Tringa hypoleucos, Linn. S. N. i. p. 250 (1766).

145. *TOTANUS GLAREOLA*.

Tringa glareola, Linn. S. N. i. p. 250 (1766).

146. ERYTHRA PHŒNICURA.

Rallus phœnicurus, Forster, Zool. Ind. p. 19, t. 9, "Ceylon" (1781).

(?) *Rallus sumatranus*, Raffles, t. c. p. 328, "Sumatra" (1821).

147. BUTORIDES JAVANICA.

Ardea javanica, Horsf. t. c. p. 190, "Java" (1820); Raffles, t. c. p. 326, "Sumatra."

148. ARDEA PURPUREA.

Ardea purpurea, Linn. S. N. i. p. 236 (1766).

149. DEMIEGRETTE SACRA.

Ardea sacra, Gm. S. N. i. p. 640 (1788).

150. STERNA MEDIA.

Sterna media, Horsf. l. c. p. 198, "Java" (1820); Saunders, P. Z. S. 1876, p. 655.

151. STERNA BERGII.

Sterna bergii, Lichtenst. Verzeich. p. 80, "South Africa" (1823); Saunders, t. c. p. 657.

I am indebted to Mr. Saunders for the identification of these two Terns.

XXV.—*Report on the Additions to the Collection of Birds in the British Museum in 1875**.

WITH the exception of the year 1874, in which Mr. Wallace's collection was purchased by the Trustees, the last year shows a greater increase in this branch of the department than any of the preceding years, the total number of acquisitions amounting to 4277 specimens, among which were 152 species

* Extracted from a Return to an Order of the Honourable The House of Commons, dated 6 April 1877;—for an Account "of the Income and Expenditure of the British Museum (Special Trust Funds), for the Financial Year ended the 31st day of March 1877; and a Return of the Number of Persons admitted to visit the Museum in each Year from 1871 to 1876, both years inclusive; together with a Statement of the Progress made in the Arrangement of the Collections; and an Account of Objects added to them in the year 1876."



JGKeulemans lith

M & N Hanhart imp

ÆGITHINA VIRIDISSIMA, 1 ♂, 2 ♀.

See page 487



J.G. Keulemans lith.

M & N Hanhart imp

1. PRINIA RAFFLESI.
2. BRACHYPTERYX BUXTONI.